

## Tree-of-Heaven



Tree-of-heaven or ailanthus [*Ailanthus altissima* (Mill.) Swingle] is a shallow-rooted deciduous tree to 80 feet (25 m) tall with long pinnately compound leaves having two circular glands under small lobes on leaflet bases. Large terminal clusters of greenish flowers in early summer yield persistent clusters of wing-shaped fruit with twisted tips on female trees. Light-green seeds in midsummer are capable of germination. Viable seed are produced by 2- to 3-year-old plants, and a mature tree can produce 300,000 seeds per year. Seed can be blown up to 330 feet (100 m) from parent. Root sprouts will appear after the main stem is deadened, and root segments left in soil after pulling treatments will sprout. Sprouts can grow 10 to 14 feet (3 to 4 m) tall the first year. This vigorous growth can continue for 4 or more years.

### **Management strategies:**

- Do not plant. Remove prior plantings, and control sprouts and seedlings. Bag and dispose of fruit in a dumpster or burn.
- Target female seed-producing plants.
- Minimize disturbance within miles of where this plant occurs, and anticipate wider occupation when plants are present before disturbance.
- Treat when new plants are young to prevent seed formation.
- Cutting and pulling treatments result in abundant surface root sprouts and should not be used without herbicide treatments.
- Burning treatments are suspected of having minimal topkill effect due to scant litter.

### **Recommended control procedures:**

**Large trees.** Make stem injections and then apply Garlon 3A when safety to surrounding vegetation is desired, or Pathway\* or Arsenal AC\* in dilutions and cut-spacings specified on the herbicide label (midsummer best, late winter somewhat less effective). For felled trees, apply the herbicides to stem and stump tops immediately after cutting. Also, ORTHO Brush-B-Gon, Enforcer Brush Killer, and Vine-X are effective undiluted for treating cut-stumps and available in retail garden stores (safe to surrounding plants).

**Saplings.** Apply as basal sprays in mixed in a labeled basal oil product, vegetable oil or mineral oil with a penetrant, or fuel oil or diesel fuel (where permitted) using Garlon 4 as a 20-percent solution (5 pints per 3-gallon mix) when safety to surrounding vegetation is desired; or Stalker\* as a 6- to 9-percent solution (1.5 to 2 pints per 3-gallon mix).

**Seedlings and saplings.** Thoroughly wet all leaves with one of the following herbicides in water with a surfactant (July to October): Arsenal AC\* as a 0.75-percent solution (3 ounces per 3-gallon mix); Arsenal PowerLine\* as a 1.5-percent solution (6 ounces per 3-gallon mix); Krenite S as a 15-percent solution (58 ounces per 3-gallon mix); Escort XP\* at 1 ounce per acre; or when safety to surrounding vegetation is desired, Garlon 4 as a 1- to 2-percent solution (4 to 8 ounces per 3-gallon mix) or Garlon 3A as a 2-percent solution (8 ounces per 3-gallon mix).

\* Nontarget plants may be killed or injured by root uptake.